E021 Fast Packet Access Service

E21. FAST PACKET ACCESS SERVICE

CONTENTS

E21. FAST PACKET ACCESS SERVICE

E21.1 Exchange Access Frame Relay Service (XAFRS) (a.k.a. BellSouth Exchange Access Frame Relay Service)

E21.1.1 Service Description

A. Exchange Access Frame Relay Service (XAFRS) (a.k.a. BellSouth Exchange Access Frame Relay service) is a connection oriented packet-switched data service allowing for the interconnection of local area networks (LANS) or other compatible customer equipment. This service provides efficient throughput at various transmission speeds.

XAFRS (a.k.a. BellSouth Exchange Access Frame Relay service) allows for the transfer of variable length frames (packets). Frames are relayed by virtual connections; frames travel a fixed path through the network although bandwidth is not dedicated to each virtual connection.

This service uses Permanent Virtual Circuit (PVCs). A PVC is a logical channel from one XAFRS (a.k.a. BellSouth Exchange Access Frame Relay service) network interface to another XAFRS (a.k.a. BellSouth Exchange Access Frame Relay service) network interface. PVCs are end-to-end, bi-directional channels that are established via the service provisioning process.

The XAFRS (a.k.a. BellSouth Exchange Access Frame Relay service) standard specifies an address field called the Data Link Connection Identifier (DLCI). The DLCI specifies a connection. ***A Standard PVC is created via the mapping of two Standard DLCIs; on an optional basis, features are available to allow the creation of Priority PVCs.*** (C)

XAFRS (a.k.a. BellSouth Exchange Access Frame Relay service) is comprised of a network interface component plus optional features. Connection to XAFRS (a.k.a. BellSouth Exchange Access Frame Relay service) network interfaces may be accomplished through dedicated access. For intrastate dedicated access, rates, charges, and regulations for Special Access (a.k.a. BellSouth SPA) service are specified in Section E7. preceding. Only non-channelized bandwidth may terminate on an XAFRS (a.k.a. BellSouth Exchange Access Frame Relay service) network interface.

There are two network interfaces available - a User Network Interface (UNI) and a Network-to-Network Interface (NNI).

The User Network Interface (UNI) is a standard interface used to connect the customer to the XAFRS (a.k.a. BellSouth Exchange Access Frame Relay service) network. It receives the data frame from the customer's network or device and verifies that the DLCI is valid before relaying the frame to the destination. The UNI is offered at transmission speeds of 56 Kbps, 64 Kbps, 1.536 Mbps, and 44.210 Mbps.

The Network-to-Network Interface (NNI) specifies how an XAFRS (a.k.a. BellSouth Exchange Access Frame Relay service) switch sends and receives data from another provider's Frame Relay switch. The NNI is offered at transmission speeds of 56 Kbps, 64 Kbps, 1.536 Mbps and 44.210 Mbps.

B. Technical Specifications

The provision of Exchange Access Frame Relay Service (XAFRS) (a.k.a. BellSouth Exchange Access Frame Relay service) requires the applicable network interface component. In addition, the customers may add optional features. Each of the components of the service are described in this Section.

All services installed after the effective date of this Tariff will conform to the transmission specification standards in the following references:

UNI Specifications for XAFRS (a.k.a. BellSouth Exchange Access Frame Relay service) are:

ANSI T1.617-1991, "Integrated Services Digital Network (ISDN) - Digital Subscriber Signaling System No. 1 (DSS1) - Signaling Specification for Frame Relay Service", American National Standards Institute, and ANSI T1.618-1991, "Integrated Services Digital Network (ISDN) - Core Aspects of Frame Relay Bearer Service", American National Standards Institute. This document is available from the American National Standards Institute, 11 West 42nd Street, New York, N.Y. 10036.

Document No. 001-208966, "Frame Relay Specification with Extension Based on Proposed T1S1 Standards", Digital equipment Corporation, Northern Telecom, Inc., and StrataCom, Inc. This document is available from ***the*** Frame Relay Forum, ***39355 California Street***, Suite ***307, Fremont***, CA 94***538***. (T)

NNI Specifications for XAFRS (a.k.a. BellSouth Exchange Access Frame Relay service) are:

Frame Relay Forum Document FRF.2, Frame Relay Network-to-Network Phase 1 Implementation Agreement. This document is available from ***the*** Frame Relay Forum, ***39355 California Street***, Suite 307, ***Fremont***, CA 94***538***. (T)

All UNI access facilities must be in conformance with ANSI standards T1.617-1991, T1.618-1991. These documents are available from the American National Standards Institute, 11 West 42nd Street, New York, New York 10036.

E21. FAST PACKET ACCESS SERVICE

E21.1 Exchange Access Frame Relay Service (XAFRS) (a.k.a. BellSouth Exchange Access Frame Relay Service) (Cont'd)

E21.1.1 Service Description (Cont'd)

B. Technical Specifications (Cont'd)

All NNI access facilities must be in conformance with ANSI standards and ***Telcordia*** Technical Reference TS-TSV-001370. This document is available from ***Telcordia Technologies Direct Sales***, 8 Corporate Place, ***PYA 3A-184,*** Piscataway, N.J. 08854 (T)

Performance specifications for XAFRS (a.k.a. BellSouth Exchange Access Frame Relay service) are:

BellSouth Technical Reference 73587, Frame Relay Service Interface and Performance Specifications. This document is available from BellSouth Telecommunications, Inc., Regional Documentation Coordinator, 20th Floor, 600 North 19th Street, Birmingham AL 35203.

C. Interface Specifications

The following specifications are available with this service:
Digital Packet (UNI)
Digital Packet (NNI)

E21.1.2 Rate Categories

A. The following rate categories apply to XAFRS (a.k.a. BellSouth Exchange Access Frame Relay service):

1. Network Interface

   This rate category provides for the customer's termi***na***tion on the Fast Packet switch. The Network Interface rate category includes the packet switching function.

2. Optional Features

   The Optional Features rate category provides for optional features which may be added to XAFRS (a.k.a. BellSouth Exchange Access Frame Relay service) to improve its quality or utility to meet specific communications requirements.

   a. DLCIs per UNI or NNI

      This feature provides for the assignment of Data Link Channel Identifiers (DLCIs) per UNI or NNI. One DLCI is required per UNI or NNI. When any two DLCIs are mapped together, a PVC can be created. (C)

      One Initial DLCI is ***applicable when DLCIs are ordered at the same time as the installation of a*** UNI ***or*** NNI. ***Only one "Initial" DLCI (either one Initial Standard DLCI or one Initial Priority DLCI) is allowed per UNI or NNI. Additional DLCIs (beyond this initial DLCI) ordered with the installation of the UNI or NNI and any DLCIs ordered subsequent to the installation of the UNI or NNI are considered Additional DLCIs. A DLCI which is not a Priority DLCI, as discussed following, is referred to as a Standard DLCI.*** (C)

      Priority PVC capability allows a customer to differentiate specific PVCs with regard to the importance of the data within those PVCs as compared to other PVCs. In the case of contention or network congestion, the network will give precedence to the frames of a Priority PVC over frames of a Standard PVC. XAFRS (a.k.a. BellSouth Exchange Access Frame Relay service) allows the creation of Priority PVCs. Such a Priority PVC is formed by the mapping of two Priority DLCIs (as set forth in E21.1.6.B.1); these Priority DLCIs must have an associated CIR value of greater than zero. A request to convert an existing Standard PVC to a Priority PVC (or vice versa) shall be considered as a request to disconnect the existing DLCIs and as a request to connect the new DLCIs. (N)

   b. Committed Information Rate (CIR)

      Committed Information Rate is a feature that enables the customer to select a sustained throughput under normal conditions. A CIR must be selected for each DLCI. A CIR selected with a value greater than zero has a separate charge from any DLCI charges. Frames submitted at a rate above the subscribed CIR will be marked "discard eligible" (DE) and, should network congestion occur, are subject to being dropped by the network. If CIR is set equal to zero, then all frames will be marked DE. However, in the absence of network congestion, DE marked frames will be transported with the same reliability as frames not marked DE. The CIR value selected cannot exceed the minimum transmission speed of the link of either end of the PVC.

      The CIR value of Priority DLCIs must be greater than zero. (N)

3. Feature Change Charge

   In addition to any specific Optional Feature charges, a Feature Change Charge applies whenever a change is made (at the customer's request) to a single optional feature within a single network configuration on a single switch. Although multiple changes may be caused by such actions, only one Feature Change Charge will apply. (M)

Material previously appearing on this page now appears on page(s) 3 of this section.

E21. FAST PACKET ACCESS SERVICE

E21.1 Exchange Access Frame Relay Service (XAFRS) (a.k.a. BellSouth Exchange Access Frame Relay Service) (Cont'd)

E21.1.2 Rate Categories (Cont'd)

A. The following rate categories apply to XAFRS (a.k.a. BellSouth Exchange Access Frame Relay service): (Cont'd)

4. Transfer of Service (M)

When a change to the customer of record is requested, transfer of service charges, as set forth in E21.1.6.C. following will apply. Charges are applied on a Billing Account Number (BAN). (M)

Administrative changes, as identified following, will be made without charge(s) to the customer. Such changes require the continued provision and billing of the Access Service to the same entity. (i.e., customer remains responsible for all outstanding indebtedness for Access Service). Administrative changes are as follows:

a. Change of customer name (i.e., the customer of record does not change but rather the customer of record changes its name -- e.g., AT&T-Long Lines to AT&T-Communications),

b. Change of customer or customer's end user premises address when the change of address is not a result of physical relocation of equipment,

c. Change in billing data (name, address, or contract name or telephone number. The customer of record does not change),

d. Change of customer circuit identification,

e. Change of billing account number,

f. Change of customer test line number,

g. Change of customer or customer's end user contact name or telephone number, and

h. Change of jurisdiction.

All other service arrangements, including physical changes to existing services, will be charged as follows:

If the change involves the addition of an optional feature which has a separate nonrecurring charge, that nonrecurring charge will apply.

E21.1.3 Acceptance Testing

At no additional charge, and at the customer's request, the Company will cooperatively test at the time of installation.

E21.1.4 Ordering Options and Conditions

The Access Order, as set forth in Section E5. preceding, is used in the provisioning of Exchange Access Frame Relay Service (XAFRS) (a.k.a. BellSouth Exchange Access Frame Relay service). Also included in that section are other charges which may be associated with ordering XAFRS (a.k.a. BellSouth Exchange Access Frame Relay service) (e.g., Service Date Change Charges, Cancellation Charges, etc.).

E21.1.5 Rate Regulations

A. Rates and charges are specified in E21.1.6 following for XAFRS (a.k.a. BellSouth Exchange Access Frame Relay service). XAFRS (a.k.a. BellSouth Exchange Access Frame Relay service) is available under the Fast Packet Services Payment Plan (SPP) as specified in E2.4.9.B. ***of this Tariff***. (T)

B. Minimum Period of Service

The minimum period is one month.

C. Installation of Service

Nonrecurring charges apply to each UNI or NNI on each XAFRS (a.k.a. BellSouth Exchange Access Frame Relay service) installed.

Nonrecurring charges for the Network Interface elements are set forth in E21.1.6.A. following.

D. Installation of Optional Features

Nonrecurring charges apply to the installation of optional features as set forth in E21.1.6.B. following.

Material appearing on this page previously appeared on page(s) 2 of this section.

E21. FAST PACKET ACCESS SERVICE

E21.1 Exchange Access Frame Relay Service (XAFRS) (a.k.a. BellSouth Exchange Access Frame Relay Service) (Cont'd)

E21.1.5 Rate Regulations (Cont'd)

E. Service Rearrangements

Service rearrangements are changes to existing (installed) services which do not result in a change in the minimum period requirements as set forth in B. preceding. Changes which result in the establishment of new minimum period obligations are treated as disconnects and starts. A change which results from a transfer of service is described and charged as set forth in F. and E21.1.6.C. following.

F. Transfer of Service

When a change in billing data (e.g., name, address, contract name, or telephone number) is requested in association with a change in the customer's record, transfer of service charges, as set forth in E21.1.6.C. following will apply. Charges are applied on a Billing Account Number (BAN).

G. Maintenance

In order to maintain the quality of XAFRS (a.k.a. BellSouth Exchange Access Frame Relay service), the Company reserves the right to perform preventive maintenance and software updates to the network. This could result in XAFRS (a.k.a. BellSouth Exchange Access Frame Relay service) being unavailable during the time period between 2:00 A.M. and 4:00 A.M. Eastern Time on any given ***Monday*** or Sunday morning. However, the Company only expects to utilize this maintenance window for any given switch on the average of once a quarter. In addition, the Company will make every reasonable effort to provide advance notice to those customers likely to be severely affected by such maintenance work. This maintenance window may be adjusted by the Company upon written notice to the customer. (C)

E21.1.6 Rates and Charges

A. Network Interface

1. Per UNI

		Nonrecurring Charge	Month To Month	A 12 to 24 Mos. Plan	B 25 to 48 Mos. Plan	USOC
(a)	56 Kbps	$300.00	$62.00	$49.00	$44.00	XAFU5
(b)	64 Kbps	300.00	70.00	56.00	50.00	XAFU6
(c)	1.536 Mbps	410.00	294.00	234.00	210.00	XAFU1
(d)	44.210 Mbps	1,050.00	2,426.00	1,920.00	1,715.00	XAFU4

2. Per NNI

(a)	56 Kbps	300.00	62.00	49.00	44.00	XAFN5
(b)	64 Kbps	300.00	70.00	56.00	50.00	XAFN6
(c)	1.536 Mbps	410.00	294.00	234.00	210.00	XAFN1
(d)	44.210 Mbps	1,050.00	2,426.00	1,920.00	1,715.00	XAFN4

B. Optional Features

1. DLCI

		Nonrecurring Charge	Monthly Rate	USOC
(a)	Initial Standard DLCI[1]	$-	$-	XAFD1
(b)	Additional Standard DLCI	25.00	1.50	XAFD2
(c)	Initial Priority DLCI[1,2]	-	5.00	XAFP1
(d)	Additional Priority DLCI[2]	70.00	5.00	XAFP2

Note 1: One "Initial" DLCI is applicable when DLCIs are ordered at the same time as the installation of the Network Interface. Only one Initial DLCI (either one Initial Standard DLCI or one Initial Priority DLCI) is allowed per Network Interface. All other DLCIs are considered Additional DLCIs.

Note 2: A Priority DLCI must have CIR with a value greater than 0.

E21. FAST PACKET ACCESS SERVICE

E21.1 Exchange Access Frame Relay Service (XAFRS) (a.k.a. BellSouth Exchange Access Frame Relay Service) (Cont'd)

E21.1.6 Rates and Charges (Cont'd)

B. Optional Features (Cont'd)

2. Committed Information Rate (CIR) (Per DLCI) cannot exceed the minimum transmission speed of the link at either end of the PVC. (M)

		Nonrecurring Charge	Monthly Rate	USOC	
(a)	0 Bps	$-	$-	XAFCA	(M)
(b)	1 thru 32 Kbps	-	7.00	XAFCB	(M)
(c)	33 thru 56 Kbps	-	12.00	XAFCC	(M)
(d)	57 thru 64 Kbps	-	13.00	XAFCD	(M)
(e)	65 thru 128 Kbps	-	18.00	XAFCG	(M)
(f)	129 thru 256 Kbps	-	24.00	XAFCH	
(g)	257 thru 384 Kbps	-	28.00	XAFCJ	
(h)	385 thru 512 Kbps	-	32.00	XAFCK	
(i)	513 thru 768 Kbps	-	36.00	XAFCL	
(j)	769 Kbps thru 1.536 Mbps	-	55.00	XAFCM	
(k)	1.537 thru 4 Mbps	-	120.00	XAFCP	
(l)	5 thru 10 Mbps	-	160.00	XAFCQ	
(m)	11 thru 16 Mbps	-	226.00	XAFCR	
(n)	17 thru 34 Mbps	-	250.00	XAFCT	
(o)	35 thru 44.210 Mbps	-	370.00	XAFCU	

C. Service Modification

1. Feature Change Charge

(a)	Per Occurrence, Per Feature	25.00	-	XAFFC

2. Transfer of Service

(a)	Per Billing Account Number	65.00	-	XAFTF

E21.2 (DELETED)

Material appearing on this page previously appeared on page(s) 4 of this section.

E21. FAST PACKET ACCESS SERVICE

E21.2 (DELETED) (Cont'd)

(D)

E21. FAST PACKET ACCESS SERVICE

E21.2 (DELETED) (Cont'd)

(D)

E21. FAST PACKET ACCESS SERVICE

E21.2 (DELETED) (Cont'd)

(D)

E21. FAST PACKET ACCESS SERVICE

E21.2 (DELETED) (Cont'd)

(D)

E21. FAST PACKET ACCESS SERVICE

E21.3 BellSouth Exchange Access Asynchronous Transfer Mode Service (XAATMS) (N)

E21.3.1 Service Description (N)

A. BellSouth Exchange Access Asynchronous Transfer Mode (ATM) Service (XAATMS) is a connection-oriented data service based on ATM cell-based switching technology. BellSouth XAATMS allows for the interconnection of ATM compatible customer equipment by providing efficient throughput at high speeds of transmission. BellSouth XAATMS provides the switching of symmetrical duplex transmissions of fixed-length ATM cells (herein referred to as ATM cells). (N)

A user network interface (UNI) is available with BellSouth XAATMS. The UNI is a standard interface used to connect the customer to the BellSouth XAATMS switch. It receives the ATM cells into the ATM switch and verifies that the addressing and traffic parameters are valid (according to BellSouth XAATMS technical specifications as referenced in E21.3.1.B. following) before relaying the ATM cells to the specified destination. The UNI is offered at transmission speeds of 1.536 Mbps, 44.210 Mbps, 149.760 Mbps and 599.040 Mbps. (N)

The rate structure for BellSouth XAATMS is comprised of a Network Interface rate element by transmission speed and rate elements for PVC Features (representing ATM traffic). Connection to BellSouth XAATMS network interfaces is accomplished through dedicated access. For intrastate dedicated access, rates, charges, and regulations for Special Access (a.k.a. BellSouth SPA) Services are specified in Section 7 preceding. Only non-channelized bandwidth may terminate on a BellSouth XAATMS network interface. (N)

As BellSouth XAATMS is a connection oriented service, to transfer information a virtual connection must be set up between two network interfaces on a BellSouth XAATMS switch. BellSouth XAATMS supports ATM traffic via permanent virtual connections (PVCs). PVCs are bi-directional virtual channels that are established via the service provisioning process. (N)

For BellSouth XAATMS, the logical path between a customer's premises and a network interface on the BellSouth XAATMS switch is referred to as an ATM PVC segment. The mapping together of two ATM PVC segments through the BellSouth XAATMS switch creates an ATM PVC. This ATM PVC is a logical channel representing the path from one premises associated with a BellSouth XAATMS network interface, through the BellSouth XAATMS switch, to a premises associated with a different network interface on the BellSouth XAATMS switch. (N)

The following provides additional information on the terms used to describe the attributes of BellSouth XAATMS with respect to the PVC Feature Charges which apply for ATM PVC traffic. Information is provided regarding ATM PVC segment, ATM PVC service categories, ATM PVC traffic parameters, and ATM PVC segment bandwidth. (N)

1. ATM PVC Segment (N)

   For BellSouth XAATMS, the ATM PVC segment defines the logical path between a customer's premises and the network interface on the BellSouth XAATMS switch. An ATM PVC segment must be provisioned by the Company via service order activity and remain in place until requested to be removed by the customer. For BellSouth XAATMS, two ATM PVC segments are mapped together through the BellSouth XAATMS switch to create an ATM PVC representing a virtual channel through the BellSouth XAATMS network. (N)

2. ATM PVC Service Categories (N)

   ATM PVC service categories are established to support the service requirements of various categories of customer applications for ATM PVCs. Four ATM PVC service categories are available. The customer must specify the desired service category for each ATM PVC that is ordered. BellSouth XAATMS supports the following types of ATM PVC service categories: (N)

   a. Constant Bit Rate (CBR): CBR allows for applications where an ATM PVC requires special network timing requirements (i.e., strict PVC cell loss, cell delay and cell delay variation performance). For example, a CBR ATM PVC would be utilized for applications requiring circuit emulation (i.e., a continuously operating logical channel) over BellSouth XAATMS at transmission speeds comparable to DS1 and DS3. Such applications would include private line like service or voice type service where delays in transmission cannot be tolerated. The customer specifies the bandwidth required for each CBR ATM PVC when it is ordered. (N)

E21. FAST PACKET ACCESS SERVICE
E21.3 BELLSOUTH EXCHANGE ACCESS ASYNCHRONOUS TRANSFER MODE SERVICE (XAATMS)(CONT'D)

E21.3.1 Service Description (Cont'd)

A. (Cont'd)

2. PVC Service Categories (Cont'd)

b. Variable Bit Rate - Real Time (VBR-RT): VBR-RT allows for applications where an ATM PVC requires low cell delay variation. For example, VBR-RT would be utilized for applications such as variable bit rate video compression and packet voice and video which are somewhat tolerant of delay. The customer specifies the bandwidth required for each VBR-RT ATM PVC when it is ordered.

c. Variable Bit Rate - Non-Real Time (VBR-NRT): VBR-NRT allows for an ATM PVC that can tolerate larger cell delay variations than VBR-RT. For example, VBR-NRT would be utilized for applications such as data file transfers. The customer specifies the bandwidth required for each VBR-NRT ATM PVC when it is ordered.

d. Unspecified Bit Rate (UBR): UBR allows for an ATM PVC where the user does not require one of the ATM PVC service categories described in (a) through (c) preceding. For example, UBR would be utilized where the customer seeks a low cost method of transporting bursty data for non-critical applications that can tolerate delay variations. The Company will attempt to deliver all ATM cells received via UBR ATM PVCs; however, network congestion may result in loss of ATM cells.

3. ATM PVC Traffic Parameters

In accordance with the technical specifications for BellSouth XAATMS set forth in the technical publications referenced herein E21.3.1.B., each non-UBR type ATM PVC has a set of traffic parameters to describe the characteristics of the information being transmitted. Fixed values for these traffic parameters are derived from the ATM PVC bandwidth specified by the customer for each ATM PVC. These parameters are:

a. Peak Cell Rate (PCR): The PCR, in cells per second, is an upper bound on the source traffic that can be submitted on a BellSouth XAATMS network interface. PCR is a traffic parameter considered for both CBR and VBR service categories.

PCR is the only traffic parameter considered for a CBR ATM PVC; the equivalent bandwidth per CBR ATM PVC equals the PCR, in cells per second, times 0.000424.

PCR is one of three traffic parameters considered for a VBR ATM PVC. For a VBR-RT PVC, PCR is 200% of the SCR described following. For VBR-NRT, PCR is 400% of the SCR described following.

b. Sustainable Cell Rate (SCR): The SCR, in cells per second, is an upper bound on the conforming average cell rate of a BellSouth XAATMS network interface over time.

SCR is a traffic parameter considered only for a VBR ATM PVC. The equivalent bandwidth per VBR-RT ATM PVC is equal to the SCR, in cells per second, times 0.000512. The bandwidth per VBR-NRT ATM PVC is equal to the SCR, in cells per second, times 0.000804.

c. Maximum Burst Size (MBS): MBS is the maximum number of consecutive cells that may be transmitted at the peak cell rate.

MBS is a traffic parameter considered only for a VBR ATM PVC. For a VBR-RT ATM PVC, the MBS is fixed at 32 cells. For a VBR-NRT ATM PVC, the MBS is fixed at 100 cells.

(M)

Material previously appearing on this page now appears on page(s) 11.1 of this section.

E21. FAST PACKET ACCESS SERVICE
E21.3 BELLSOUTH EXCHANGE ACCESS ASYNCHRONOUS TRANSFER MODE SERVICE (XAATMS)(CONT'D)

E21.3.1 Service Description (Cont'd)

A. (Cont'd)

4. ATM PVC Segment Bandwidth (M)

An ATM PVC Segment Bandwidth Charge is applicable for each CBR or VBR ATM PVC segment. Such non-UBR ATM PVC equivalent bandwidth represents the BellSouth XAATMS network resources based on the ATM PVC's traffic parameters. The ATM PVC Segment Bandwidth Charge is derived by multiplying the ATM PVC segment's equivalent bandwidth (calculation following) by the appropriate ATM PVC Segment Bandwidth Charge (expressed in megabits or increments of 64 Kbps as described following). (M)

The following calculations are applicable for determining non-UBR ATM PVC segment bandwidth based upon the ATM PVC category of service. (M)

a. CBR equivalent bandwidth is equal to the PCR (cells per second) times 0.000424. PCR is equal to increments of 64 Kbps of equivalent bandwidth times 15***0.943***, or megabits of equivalent bandwidth times 2358.***491***. (M)(T)

b. VBR-RT equivalent bandwidth is equal to the SCR (cells per second) times 0.000512. For VBR-RT service, the PCR is fixed at 200 percent of the SCR and the MBS is fixed at 32 cells. SCR is equal to increments of 64 Kbps of equivalent bandwidth times 125.***000***, or megabits of equivalent bandwidth times 1953.***125***. (M)(T)

c. VBR-NRT equivalent bandwidth is equal to the SCR (cells per second) times 0.000804. For VBR-NRT service, the PCR is fixed at 400 percent of the SCR (unless specified otherwise by the customer[1]) and the MBS is fixed at 100 cells. SCR is equal to increments of 64 Kbps of equivalent bandwidth times ***79.602***, or megabits of equivalent bandwidth times 124***3.781***. (M)(T)

Where the result from the ATM PVC segment equivalent bandwidth calculation is greater than 1.536 Mbps, the value is expressed in units of megabits and (if a fraction of a megabit) is rounded up to the next whole megabit. This bandwidth is multiplied by the Per Megabit Bandwidth Charge. (M)

Where the result from the ATM PVC segment equivalent bandwidth calculation is less than or equal to 1.536 Mbps, that number should be divided by .064 Mbps to arrive at a quantity of 64 Kbps increments. If the resulting number is not a whole number, it is rounded up to the next whole number and represents the number of 64 Kbps increments that should be utilized in the derivation of the PVC Segment Bandwidth Charge. This bandwidth is multiplied by the Per Increment of 64 Kbps Bandwidth Charge. (M)

Material appearing on this page previously appeared on page(s) 11 and 12 of this section.

E21. FAST PACKET ACCESS SERVICE
E21.3 BELLSOUTH EXCHANGE ACCESS ASYNCHRONOUS TRANSFER MODE SERVICE (XAATMS)(CONT'D)

E21.3.1 Service Description (Cont'd)

A. (Cont'd)

4. ATM PVC Segment Bandwidth (Cont'd)

(M)

The following table illustrates the ATM PVC segment equivalent bandwidth calculation for each non-UBR type ATM PVC with 1 megabit of bandwidth.

(T)

		Traffic Parameters			(T)
		Peak	Sustainable	Maximum	(T)
ATM PVC	Equivalent	Cell	Cell	Burst	(T)
Service Category	Bandwidth	Rate[1]	Rate[1]	Size[2]	(T)
CBR	1 Megabit	2,358	N/A	N/A	
VBR-RT	1 Megabit	3,906	1,953	32	
VBR-NRT	1 Megabit	4,975	1,244	100	

B. Technical Specifications

BellSouth XAATMS services installed after the effective date of this tariff will conform to the service specifications and standards for BellSouth XAATMS service (including the BellSouth XAATMS UNI) set forth in the following references:

- BellSouth Technical Reference 73585, "Asynchronous Transfer Mode (ATM) Network Interface and Performance Specifications". This document is available from BellSouth Telecommunications, Inc., Regional Documentation Coordinator, 20th Floor, 600 North 19th Street, Birmingham, AL 35203.

The specifications set forth in BellSouth TR 73585 are in conformance with the following national standards for ATM services:

- ATM Forum document, "ATM User-Network Interface Specification" (Versions 3.0 and 3.1). This document is available from ATM Forum, 2570 West El Camino Real, Suite 304, Mountain View, California, 94040.

C. Interface Specifications

In accordance with the interface specifications set forth in BellSouth TR 73585, the following is available with BellSouth XAATMS:

- ATM Cell-switched (UNI)

E21.3.2 Rate Categories

A. The following rate categories apply to BellSouth XAATMS:

1. Network Interface

This rate category provides for the customer's termination on the BellSouth XAATMS switch. The Network Interface rate category includes the BellSouth XAATMS switching function.

2. PVC Features

The PVC Features rate category provides for the ordering and provisioning of ATM PVCs in association with the BellSouth XAATMS network interface.

Note 1: Cells per second. (N)
Note 2: Cells. (N)

Material previously appearing on this page now appears on page(s) 11.1 of this section.

E21. FAST PACKET ACCESS SERVICE

E21.3 BellSouth Exchange Access Asynchronous Transfer Mode Service (XAATMS)(Cont'd) (N)

E21.3.2 Rate Categories (Cont'd) (N)

A. (Cont'd) (N)

2. PVC Features (Cont'd) (N)

The rates for PVC Features may vary by ATM PVC service category and are listed in E21.3.6.B. by applicable ATM PVC service category. (N)

a. ATM PVC Segment Charge - An ATM PVC Segment Charge applies for each ATM PVC segment established over a network interface. An ATM PVC Segment Charge applies under all ATM PVC service categories. (N)

b. ATM PVC Segment Bandwidth Charge - An ATM PVC Segment Bandwidth Charge is required per ATM PVC segment established under the CBR or VBR ATM PVC service category (but is not applicable to UBR ATM PVCs). ATM PVC bandwidth represents BellSouth XAATMS network resources required for the non-UBR ATM PVC and is based on the non-UBR ATM PVC's traffic parameters (i.e., PCR, SCR, and MBS). The total charge for this rate element per segment is determined by multiplying the non-UBR ATM PVC segment bandwidth by the ATM PVC Segment Bandwidth Charge, either Per Megabit or Per Increment of 64 Kbps (as appropriate per E21.3.1.A.4.). (N)

c. UBR Service Activation Charge - A UBR Service Activation Charge is applicable for each network interface over which UBR PVC(s) will traverse. One charge is applicable per network interface regardless of how many UBR PVCs will traverse that network interface. (N)

3. Feature Change Charge (N)

A Feature Change Charge applies for a customer request to change an existing BellSouth XAATMS PVC Feature from E21.3.6.B. for which there is no nonrecurring charge. (Examples: A Feature Change Charge applies when a customer requests a change in the ATM PVC segment bandwidth required on an existing non-UBR ATM PVC. A Feature Change Charge applies when a customer requests that UBR Service Activation be added to an existing Network Interface which currently is not activated to carry UBR ATM PVCs if the request does not also include an order for a UBR ATM PVC Segment which carries a nonrecurring charge. A customer request to change the service category of an existing CBR ATM PVC to a VBR-RT ATM PVC would not involve a Feature Change Charge but would be treated as a disconnect of the CBR ATM PVC and a new request for a VBR-RT ATM PVC for which there is a nonrecurring charge.) (N)

Only one Feature Change Charge applies per customer request that involves changes to multiple existing ATM PVCs of the same ATM PVC service category that are provisioned out of the same BellSouth XAATMS switch. (For example, one Feature Change Charge would apply per customer request to change the ATM PVC segment bandwidth associated with two existing CBR ATM PVCs provisioned out of the same BellSouth XAATMS switch.) (N)

4. Transfer of Service (N)

When a change to the customer of record is requested, transfer of service charges, as set forth in E21.3.6.D. following will apply. Charges are applied per Billing Account Number (BAN). Administrative changes, as identified below, will be made without charge(s) to the customer. Such changes require the continued provision and billing of the Access Service to the same entity. (i.e., customer remains responsible for all outstanding indebtedness for Access Service). Administrative changes are as follows: (N)

- Change of customer name (i.e., the customer of record does not change but rather the customer of record changes its name -- e.g., AT&T-Long Lines to AT&T-Long Lines to AT&T-Communications), (N)
- Change of customer or customer's end user premises address when the change of address is not a result of physical relocation of equipment, (N)
- Change in billing data (name, address, or contact name or telephone number. The customer of record does not change), (N)
- Change of customer circuit identification, (N)
- Change of billing account number, (N)
- Change of customer test line number, (N)
- Change of customer or customer's end user contact name of telephone number, and (N)
- Change of jurisdiction. (N)

E21. FAST PACKET ACCESS SERVICE

E21.3 BELLSOUTH EXCHANGE ACCESS ASYNCHRONOUS TRANSFER MODE SERVICE (XAATMS) (CONT'D)

E21.3.2 Rate Categories (Cont'd)

A. (Cont'd)

4. (Cont'd)

All other service arrangements, including physical changes to existing services, will be charged as follows:

-If the change involves the addition of an optional feature which has a separate nonrecurring charge, that nonrecurring charge will apply.

E21.3.3 Acceptance Testing

At no additional charge, and at the customer's request, the Telephone Company will cooperatively test at the time of installation.

E21.3.4 Ordering Options and Conditions

The Access Order, as set forth in Section 5 preceding, is used in the provisioning of BellSouth XAATMS. Also included in that Section are other charges which may be associated with ordering BellSouth XAATMS (e.g., Service Date Change Charges, Cancellation Charges, etc.).

E21.3.5 Rate Regulations

A. Rates and charges are specified in E21.3.6. following for the ordering and provisioning of BellSouth XAATMS. BellSouth XAATMS is available under the Fast Packet Services Payment Plan (SPP) as specified in E2.4.9.B. preceding.

B. Minimum Period of Service

The minimum period per BellSouth XAATMS rate element selected is one month.

C. Installation of Service

Nonrecurring charges apply to each BellSouth XAATMS UNI installed.

Nonrecurring charges for the Network Interface elements are set forth in E21.3.6.A. following.

D. Installation of Features

Nonrecurring charges apply to each ATM PVC segment by ATM PVC service category as set forth in E21.3.6.B. following.

E. Transfer of Service

When a change in billing data (e.g., name, address, contact name or telephone number) is requested in association with a change in the customer's record, transfer of service charges, as set forth in E21.3.6.D. following will apply. Charges are applied on a per Billing Account Number (BAN).

F. Maintenance

In order to maintain the quality of BellSouth XAATMS, the Company reserves the right to perform preventive maintenance and software updates to the network. This could result in BellSouth XAATMS being unavailable during the time period between 2:00 A.M. and 4:00 A.M. Eastern Time on any given ***Monday*** or Sunday morning. However, the Company only expects to utilize this maintenance window for any given switch on the average of once a quarter. In addition, the Company will make every reasonable effort to provide advance notice to those customers likely to be affected by such maintenance work. This maintenance window may be adjusted by the Company upon written notice to the customer. (C)

E21. FAST PACKET ACCESS SERVICE

E21.3 BellSouth Exchange Access Asynchronous Transfer Mode Service (XAATMS) (Cont'd) (N)

E21.3.6 Rates and Charges (N)

A. Network Interface (N)

1. Per UNI (N)

		Nonrecurring Charges	Month To Month	A 12 to 24 Mos. Plan	B 25 to 48 Mos. Plan	USOC	
(a)	1.536 Mbps	$500.00	$395.00	$360.00	260.00	XAA11	(N)
(b)	44.210 Mbps	750.00	2,426.00	1,920.00	1,550.00	XAA14	(N)
(c)	149.760 Mbps	1,000.00	4,500.00	4,050.00	2,880.00	XAA17	(N)
(d)	599.040 Mbps	1,500.00	9,000.00	8,100.00	5,800.00	XAA19	(N)

B. PVC Features (N)

1. CBR ATM PVC Service Category (N)

		Nonrecurring Charges	Month To Month	USOC	
(a)	PVC Segment Charge, Per Segment	$70.00	$5.00	XAACS	(N)
(b)	Per Megabit-Bandwidth Charge, Per Segment, or	-	25.00	XAACM	(N)
(c)	Per Increment of 64 Kbps-Bandwidth Charge, Per Segment	-	1.60	XAACK	(N)

2. VBR-RT ATM PVC Service Category (N)

(a)	PVC Segment Charge, Per Segment	70.00	5.00	XAAVS	(N)
(b)	Per Megabit-Bandwidth Charge, Per Segment, or	-	25.00	XAAVM	(N)
(c)	Per Increment of 64 Kbps-Bandwidth Charge, Per Segment	-	1.60	XAAVK	(N)

3. VBR-NRT ATM PVC Service Category (N)

(a)	PVC Segment Charge, Per Segment	70.00	5.00	XAANS	(N)
(b)	Per Megabit-Bandwidth Charge, Per Segment, or	-	25.00	XAANM	(N)
(c)	Per Increment of 64 Kbps-Bandwidth Charge, Per Segment	-	1.60	XAANK	(N)

4. UBR ATM PVC Service Category (N)

(a)	PVC Segment Charge, Per Segment	70.00	5.00	XAAUS	(N)
	Per Network Interface				(N)
(b)	1.536 Mbps UBR Service Activation Charge	-	10.00	XAAA1	(N)
(c)	44.210 Mbps UBR Service Activation Charge	-	250.00	XAAA4	(N)
(d)	149.760 Mbps UBR Service Activation Charge	-	500.00	XAAA7	(N)
(e)	599.040 Mbps UBR Service Activation Charge	-	1,000.00	XAAA9	(N)

C. Feature Change Charge (N)

(a)	Per Occurrence, Per Feature	75.00	None	XAAFC	(N)

D. Transfer of Service (N)

(a)	Per Billing Account Number	75.00	None	XAATF	(N)

E21. FAST PACKET ACCESS SERVICE

E21.4 Reserved For Future Use (N)

E21.5 Reserved For Future Use (N)

E21.6 BellSouth Network Visibility Service (N)

E21.6.1 General (N)

A. BellSouth Network Visibility Service (NVS) is available on an optional basis as a feature of Exchange Access Frame Relay Service (XAFRS) (a.k.a. BellSouth Exchange Access Frame Relay Service) and BellSouth Exchange Access Asynchronous Transfer Mode Service (XAATMS). (N)

B. BellSouth NVS is a customer network management tool that provides customers a view into their BellSouth Fast Packet network for monitoring and trouble shooting purposes. The following BellSouth NVS options are available for XAFRS (a.k.a. BellSouth Exchange Access Frame Relay Service) and BellSouth XAATMS: Fault Management, On Demand Statistics and Performance Reports. (N)

C. BellSouth NVS supports hierarchical customer names. For example, a customer defines an overall network name (usually the customer name) and then may choose to establish multiple sub-network names. A maximum of five hierarchical tiers are available (the overall network plus four sub-network tiers). (N)

D. Access to BellSouth NVS is via a Web interface. A dial or dedicated method described in Section A32. of the General Subscriber Services Tariff may also be used to access NVS. For security reasons, customers are required to identify themselves via a username and password. The username and password are assigned at the time the account is established. Following is a description and requirements for each type of access. (N)

1. Web Interface - This interface allows customers to access BellSouth NVS via the Web using a standard Web browser. This type of access requires a Security Card. (N)

   a. Security Card – This card provides the customer a unique password identification code which will electronically change periodically. (N)

      If the customer has purchased a Security Card in conjunction with another feature or service offered by BellSouth, that Security Card may also be used in conjunction with BellSouth NVS. It is the customer's responsibility to notify BellSouth of an existing Security Card so BellSouth can ensure that the card is validated for multiple features and/or services. (N)

2. Dial or Dedicated Interface – See A32.1.2 of the General Subscriber Services Tariff. (N)

E. The customer is responsible for providing and maintaining all terminal equipment necessary to access BellSouth NVS. (N)

F. A customer may subscribe to BellSouth NVS on a monthly basis. An account is established which will include the XAFRS (a.k.a. BellSouth Exchange Access Frame Relay Service) and BellSouth XAATMS Network Interfaces designated by the customer to have BellSouth NVS capability. Customers may choose to subscribe to BellSouth NVS for all Network Interfaces in their BellSouth Fast Packet network or choose BellSouth NVS for only a portion. (N)

E21. FAST PACKET ACCESS SERVICE

E21.6 BellSouth Network Visibility Service (Cont'd) (N)

E21.6.1 General (Cont'd) (N)

G. BellSouth NVS is available in two packages, 1) Fault Management and On Demand Statistics or 2) Fault Management, On Demand Statistics and Performance Reports. All network interfaces within a customer's account must be under the same package. If a customer desires to have both packages, a separate account must be established for each package type. (N)

1. Fault Management (N)

   BellSouth NVS provides the ability to monitor fault and alarm information as network events occur. If a BellSouth network event results in automatic rerouting of customer owned PVCs on a Network Interface within the BellSouth Fast Packet network, such that those PVCs are not service impacted, then BellSouth will not send PVC events to the customer. The following Fault Management features are available on a customer and sub-network basis: (N)

   - BellSouth will provide to the customer, in near real time, all events, faults, and network alarms on any Network Interface or PVC. (N)
   - The customer can determine the severity level of alarms displayed and suppress the alarms they do not wish to view. (N)

2. On Demand Statistics (N)

   BellSouth NVS provides customers statistics for each Network Interface and PVC on a customer and sub-network basis. (N)

3. Performance Reports (N)

   BellSouth NVS provides XAFRS (a.k.a. BellSouth Exchange Access Frame Relay Service) and BellSouth XAATMS customers network performance reports on their BellSouth data network. Customers have the capability of requesting performance reports for interfaces. (Interfaces are defined as network interfaces and PVCs). BellSouth NVS provides a measure of the level of network performance of a customer's network and individual interfaces that is called the Network Performance Level. The Network Performance Level components include Incoming Utilization, Outgoing Utilization, Discarded Frames/Cells and Congestion. The Network Performance Level is used in several reports to provide a weighted performance measure taking into account all the performance parameters mentioned above. (N)

   Historical Performance reports will baseline historic network performance, trend future performance and highlight network performance problems. The following selection of reports is available: (N)

   a. Network Summary Report - Provides an overview of the customer's network performance in terms of Total Frames/Cells Transmitted and Received, Percent Total Utilization, Total Frames/Cells Discarded, and Percent Frames/Cells Discarded of Total Frames/Cells Transmitted and Received. (N)

   b. Forecast Report - Provides the network interfaces or PVCs that are projected to exceed customer specific thresholds of Utilization and Congestion. (N)

E21. FAST PACKET ACCESS SERVICE

E21.6 BellSouth Network Visibility Service (Cont'd) (N)

E21.6.1 General (Cont'd) (N)

G. (Cont'd) (N)

3. Performance Reports (Cont'd) (N)

c. Network Interface Performance Report - Provides the Network Performance Level on a customer selectable interface (network interface or PVC). (N)

d. Capacity Planning Report - Provides the top ten over-utilized and top ten under-utilized interfaces (network interface or PVC). (N)

e. Threshold Exceptions Report - Provides a daily report on the top ten interfaces that exceed a customer selectable threshold parameter. These parameters are Input Utilization, Output Utilization, Incoming Congestion, Outgoing Congestion, In Discards, and Out Discards. (N)

f. Top Ten Report - Provides a daily report of the top ten interfaces with the highest volumes and the worst Network Performance Level. It also specifies the top ten interfaces with the greatest change in both volume and Network Performance Level. (N)

E21.6.2 Rate Regulations (N)

A. Rates and charges are specified in E21.6.4 following for BellSouth NVS. (N)

B. The minimum period of service is one month. (N)

C. The rates and charges set forth for BellSouth NVS provide for the furnishing of service where suitable facilities are available. (N)

D. In order to maintain the quality of BellSouth NVS, the Company reserves the right to perform preventive maintenance and software updates. This could result in BellSouth NVS being unavailable during the time period between Midnight and 3:00 A.M. Eastern Time on Sundays. In addition, preventive maintenance may be performed on the XAFRS (a.k.a. BellSouth Exchange Access Frame Relay Service and BellSouth XAATMS circuits being monitored by BellSouth NVS on any given Monday or Sunday between 2:00 A.M. and 4:00 A.M. Eastern Time. BellSouth NVS will be unable to view these circuits while preventive maintenance is being performed. The Company only expects to utilize this maintenance window on the average of once a quarter. However, the Company reserves the right to perform maintenance at any time at its discretion that it believes such maintenance is necessary. The Company will make a reasonable effort to provide notice to those customers likely to be affected by such maintenance work. (N)

E21. FAST PACKET ACCESS SERVICE

E21.6 BellSouth Network Visibility Service (Cont'd) (N)

E21.6.3 Rate Categories (N)

The following rate categories apply to BellSouth NVS: (N)

A. Service Establishment Charge (N)

The Service Establishment Charge is a nonrecurring charge which applies per XAFRS (a.k.a. BellSouth Exchange Access Frame Relay Service) or BellSouth XAATMS customer account. If a customer is both a XAFRS (a.k.a. BellSouth Exchange Access Frame Relay Service) and BellSouth XAATMS customer, only one Service Establishment Charge will apply. This charge covers the initial establishment and set-up of the customer account in the BellSouth NVS database. A username(s) and password(s) will be assigned for use by the customer in accessing their account. At the time the account is established, a customer may also choose to establish sub accounts. (N)

B. Fault Management and On Demand Statistics (N)

A monthly charge applies for each Network Interface in the customer's network with BellSouth NVS capability. A nonrecurring charge is applicable per Network Interface at the time of installation. (N)

C. Fault Management, On Demand Statistics and Performance Reports (N)

A monthly charge applies for each Network Interface in the customer's network with BellSouth NVS capability. A nonrecurring charge is applicable per Network Interface at the time of installation. (N)

D. Subsequent Modification Charge (N)

The Subsequent Modification Charge is a nonrecurring charge which applies per Network Interface when a BellSouth NVS customer requests that existing BellSouth NVS Network Interfaces, or PVC's on the Network Interface, be modified. Examples of this charge include change of customer name and movement between packages. This charge is not applicable: (N)

- when a new PVC is added to an existing BellSouth NVS Network Interface and BellSouth NVS is requested for the new PVC, or (N)
- for a request to change a password. (N)

E. Management Access Interface (N)

All customers must have a Management Access Interface. This connection allows the customer to monitor their network. A monthly charge applies for each Web Interface. A nonrecurring charge is applicable per web access at the time of installation. A Security Card described below is required for each web access. See A32.1.2 of the General Subscriber Services Tariff for a dial or dedicated access option. (N)

- Security Card – The Security Card charge specified in E21.6.4 E. following will apply for the initial card or for the issuance of additional cards for additional users or to replace a lost, damaged or expired card. (N)

E21. FAST PACKET ACCESS SERVICE

E21.6 BellSouth Network Visibility Service (Cont'd)

E21.6.4 Rates and Charges

A. Service Establishment Charge

1. Per Customer

	Nonrecurring Charge	USOC	
(a) Each	$250.00	NVSSE	(N)

B. Fault Management and On Demand Statistics

1. Per XAFRS Network Interface

	Nonrecurring Charge	Monthly Rate	USOC	
(a) Per DS0	$75.00	$12.00	NVSFO	(N)
(b) Per DS1	75.00	12.00	NVSF1	(N)
(c) Per DS3	75.00	12.00	NVSF3	(N)

2. Per BellSouth XAATMS Network Interface

(a) Per DS1	75.00	12.00	NVSA1	(N)
(b) Per DS3	75.00	12.00	NVSA3	(N)
(c) Per OC3	75.00	12.00	NVSAC	(N)
(d) Per OC12	75.00	12.00	NVSA2	(N)

C. Fault Management, On Demand Statistics and Performance Reports

1. Per XAFRS Network Interface

(a) Per DS0	75.00	14.00	NVSRO	(N)
(b) Per DS1	75.00	14.00	NVSR1	(N)
(c) Per DS3	75.00	14.00	NVSR3	(N)

2. Per BellSouth XAATMS Network Interface

(a) Per DS1	75.00	14.00	NVST1	(N)
(b) Per DS3	75.00	14.00	NVST3	(N)
(c) Per OC3	75.00	14.00	NVSTC	(N)
(d) Per OC12	75.00	14.00	NVST2	(N)

D. Subsequent Modification Charge

1. Per Network Interface

	Nonrecurring Charge	USOC	
(a) Each	$70.00	NVSSM	(N)

E. Management Access Interface[1]

1. Web Interface

	Nonrecurring Charge	Monthly Rate	USOC	
(a) Each	$125.00	$25.00	NVSW1	(N)

2. Security Card

	Nonrecurring Charge	USOC	
(a) Each	$100.00	NVSSC	(N)

Note 1: See A32.1.2 of the General Subscriber Services Tariff for a dial or dedicated access option. (N)

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PURSUANT TO 807 KAR 5:011
SECTION 9 (1)
BY _____
EXECUTIVE DIRECTOR